

STATUS OF CLAIMS

1. Canceled.
2. (Currently amended) A shape memory polymer ~~in accordance with Claim 1~~ wherein said reaction product further comprises comprising a modifying polymer, a reaction product of styrene, a vinyl compound other than styrene, about 0.5 to about 5 % by weight of a multifunctional crosslinking agent and an initiator.
3. (Currently amended) A shape memory polymer ~~in accordance with Claim 1~~ comprising a reaction product of styrene, a vinyl compound other than styrene, about 0.5 to about 5 % by weight of a multifunctional crosslinking agent and an initiator, wherein said vinyl compound is vinyl neodecanoate, vinyl benzoate, vinyl propionate, vinyl stearate, a methylstyrene, 4-(vinylloxy)butyl stearate or a vinyl pyridine.
4. (Currently amended) A shape memory polymer in accordance with ~~Claim 1~~ Claims 2 or 3, wherein said crosslinking agent is difunctional.
5. (Original) A shape memory polymer in accordance with Claim 4 wherein said difunctional crosslinking agent is divinyl benzene, bis(4-(vinylloxy)butyl)terephthalate or bis(4-((vinylloxy)methyl)cyclohexyl)methyl terephthalate.
6. (Currently amended) A shape memory polymer in accordance with ~~Claim 1~~ Claims 2 or 3, wherein said initiator is a free radical initiator or ionic initiator.
7. (Original) A shape memory polymer in accordance with Claim 6 wherein said initiator is a free radical initiator.

8. (Original) A shape memory polymer in accordance with Claim 7 wherein said free radical initiator is an organic peroxide.

9. (Original) A shape memory polymer in accordance with Claim 6 wherein said initiator is a cationic initiator.

10. (Original) A shape memory polymer in accordance with Claim 2 wherein said modifying polymer is a thermoplastic polymer compatible with said polymer formed by the reaction product of said styrene and said vinyl compound.

11. (Currently amended) A shape memory polymer comprising a ~~polymeric~~ reaction product of styrene, a vinyl compound selected from group consisting of vinyl neodecanoate, vinyl benzoate, vinyl propionate, vinyl stearate, a methylstyrene, a vinyl pyridine and 4-(vinylloxy) butyl stearate, a difunctional crosslinking agent and a free radical or a cationic initiator.

12. (Currently amended) A shape memory polymer in accordance with Claim 10 ~~11~~ wherein said difunctional crosslinking agent is selected from the group consisting of divinyl benzene, bis[4-(vinylloxy)butyl] terephthalate and bis[[4-(vinylloxy)methyl]cyclohexyl]methyl] terephthalate.

13. (Currently amended) A shape memory polymer in accordance with Claim 12 wherein said free radical or cationic initiator is selected from the group consisting of t-butyl peroxide, t-butyl hydroxyperoxide, benzoyl peroxide, dicumyl peroxide, lauroyl peroxide, 2,2'-azobisisobutyronitrile, boron trifluoride, boron trifluoride diethyl etherate, aluminum trichloride and tin (IV) chloride.

14. (Currently amended) A shape memory polymer in accordance with Claim 13 wherein said reaction product includes a thermoplastic polymer compatible with the polymer formed by the reaction product of said styrene and said vinyl compound.

15. (Currently amended) A shape memory polymer in accordance with Claim 13 wherein said thermoplastic polymer is polystyrene or a polyolefin.

16. (Original) A shape memory polymer in accordance with Claim 13 wherein said vinyl compound is vinyl neodecanoate, said difunctional crosslinking agent is divinyl benzene and said initiator is selected from the group consisting of dicumyl peroxide, benzoyl peroxide and lauroyl benzene.

17. (Original) A shape memory polymer in accordance with Claim 16 wherein said reaction product includes polystyrene.

18. (Currently amended) A shape memory polymer in accordance with ~~Claim 1~~ Claims 2 or 3, wherein said reaction mixture is polymerized at a temperature in the range of between about 20°C and about 150°C and a pressure in the range of between about 14.7 psi and 50 psi over a time period in the range of between about 2 seconds and about 4 days.

19. (Original) A shape memory polymer in accordance with Claim 11 wherein said styrene comprises between about 30% and about 95%; said vinyl compound comprises between about 5% and about 60%; said difunctional crosslinking agent comprises between about 0.5% and about 5% and said initiator comprises between about 0.1% and about 4%, said percentages being by weight, based on the total weight of said shape memory polymer reaction mixture.

20. (Original) A shape memory polymer in accordance with Claim 14 wherein said styrene comprises between about 40% and about 85%; said vinyl compound comprise between about 5% and about 20%; said difunctional crosslinking agent comprises between about 0.6% and about 3%; said initiator comprises between about 0.5% and about 3%; and said thermoplastic comprises between about 5% and about 50%, said percentages being by weight, based on the total weight of said shape memory polymer reaction mixture.

21. (Original) A shape memory polymer comprising a reaction product of styrene, a vinyl compound other than styrene, a multifunctional crosslinking agent, an initiator and a modifying polymer.

22. (Original) A shape memory polymer in accordance with Claim 21 wherein said vinyl compound is vinyl neodecanoate, vinyl benzoate, vinyl propionate, vinyl stearate, a methylstyrene, 4-(vinylloxy)butyl stearate or a vinyl pyridine.

23. (Original) A shape memory polymer in accordance with Claim 21 wherein said crosslinking agent is difunctional.

24. (Original) A shape memory polymer in accordance with Claim 23 wherein said difunctional crosslinking agent is divinyl benzene, bis(4-(vinylloxy)butyl)terephthalate or bis(4-((vinylloxy)methyl)cyclohexyl)methyl terephthalate.

REMARKS

Reconsideration of the application in view of the foregoing amendments and following remarks is respectfully requested. The Examiner indicated that claims 2, 3, 10, 12 through 17 and 20 "would be allowable if rewritten in independent form to include all limitations of the base claim and any intervening claim." Also, claims 11, 19 and 21 through 24 were indicated to be allowable by the Examiner.

The claims are amended to put them in condition for allowance. Applicants submits that the claims, as amended, are in condition for allowance. Entry of the